

the access node includes an access node switch coupled to the network switch and a plurality of network control elements, and wherein the transmission network comprises a plurality of sub-networks coupled to the network control elements.

2. Communication system according to claim 1, wherein the network control elements comprise a network control switch and a plurality of channel cluster modules, in that the network control switch is coupled to the access node switch and to the channel cluster modules, and in that the channel cluster modules are coupled to the sub-network corresponding to the network control node.

3. Communication system according to claim 2, wherein the channel cluster modules comprise at least one downstream channel module.

4. Communication system according to claim 3, characterized in that the channel cluster module comprises an upstream channel module.

5. Communication system according to one of the claims 1, 2, 3 or 4, wherein the terminals comprises signaling means for exchanging network layer control information with the network switch.

6. Communication system according to one of the claims 1, 2, 3 or 4, wherein the network switch comprises proxy signaling means for deriving network layer control information from session layer and/or transport layer information exchanged between a terminal and the network switch.

7. An access node connectable to a transmission network, and to a network switch, the access node comprising:  
an access node switch coupled to a plurality of network control elements, wherein the access node switch is connectable to the network switch